CLAIMS

What is claimed is:

1. A digital signature method, comprising:

converting, on a computer system, digital data representative of a document into a predetermined format;

applying the predetermined format and a viewer program to a hash function to mathematically operate on the predetermined format and the viewer program and provide a message digest, the viewer program for viewing the predetermined format that is a representation of the document; and

encrypting the message digest using a private key to provide a digital signature.

2. The digital signature method of claim 1, further comprising incorporating into the digital signature a file including one or more parameters specifying an environment of the computer system at the time of creation of the digital signature.

3. The digital signature method of claim 2, wherein said one or more parameters includes one or both of a type and version of one or more of the following: a video card, monitor, operating system, application program, and signing interface library of the computer system.

4. The digital signature method of claim 1 further comprising timestamping the digital signature using a trusted source.

5. The digital signature method of claim 1 further comprising notarizing the digital signature.

6. The digital signature method of claim 1, wherein the predetermined format is a bitmap representation.

7. The digital signature method of claim 1 further comprising:

transmitting the digital signature, predetermined format, and viewer program over a network to a receiver computer system;

decrypting the digital signature using a public key corresponding to the private key, to recover the message digest;

applying the predetermined format and the viewer program to a hash function, to mathematically operate on the predetermined format and the viewer program to provide a calculated message digest;

comparing the calculated message digest with the recovered message digest;

if the calculated message digest is identical to the recovered message digest,

providing the predetermined format using the viewer program.

8. The digital signature method of claim 1, wherein providing the predetermined format using the viewer program comprises one or more of the following:

viewing the predetermined format on a monitor using the viewer program;

printing the predetermined format using the viewer program; and

faxing the predetermined format using the viewer program.

9. The digital signature method of claim 1, wherein the viewer program is an executable program.

10. A computer readable medium having stored therein instructions for causing a central processing unit to execute the method of claim 1.

11. A system, comprising:

a network;

a first computer system including a processor and memory including digital data representative of a document and a viewer module, said processor to convert the document into a predetermined format, apply the predetermined format and viewer module to a hash function and provide a message digest, encrypt the message digest with a private key to provide a digital signature, and transmit the predetermined format, viewer module, and digital signature over the network; and

a second computer system including a processor and memory, said processor to receive the predetermined format, viewer module, and digital signature over the network, decrypt the digital signature using a public key corresponding to the

private key, recover the message digest, apply the predetermined format and viewer module to a corresponding hash function to provide a calculated message digest, compare the calculated message digest with the recovered message digest, and view the predetermined format with the viewer program to provide a representation of the document, if the calculated message digest is identical to the recovered message digest.

12. The system of claim 11 wherein the network comprises an Internet.

13. The system of claim 11, wherein the predetermined format comprises a bitmap representation of the document.

14. The system of claim 11, wherein the viewer module is an executable program.

15. The system of claim 11, wherein the processor, on the first computer system, to further transmit a file including one or more parameters specifying an environment of the first computer system at the time of creation of the digital signature.

16. The system of claim 15, wherein said one or more parameters includes one or both of a type and version of one or more of the following: a video card,

monitor, operating system, application program, and signing interface library of the first computer system.

17. The system of claim 11 further comprising a timestamp server coupled to the network, said timestamp server to receive over the network, digitally timestamp, and transmit over the network the predetermined format, viewer module, and digital signature.

18. A method, comprising:

converting, on a computer system, a document into a predetermined format;

appending the predetermined format with a viewer program to provide a file archive, the viewer program for viewing the predetermined format that is a representation of the document;

applying the file archive to a hash function to mathematically operate on the file archive and provide a message digest; and

encrypting the message digest using a private key to provide a digital signature.

19. The method of claim 18, wherein the predetermined format is a bitmap representation.

20. The method of claim 18 further comprising:

transmitting the digital signature and the file archive over a network to a receiver computer system;

decrypting the digital signature using a public key corresponding to the private key, to recover the message digest;

applying the file archive to a hash function, to mathematically operate on the file archive to provide a calculated message digest;

comparing the calculated message digest with the recovered message digest;

if the calculated message digest is identical to the recovered message digest,

providing the predetermined format using the viewer program.

21. The method of claim 20, wherein providing the predetermined format using the viewer program comprises one or more of the following:

viewing the predetermined format on a monitor using the viewer program;

printing the predetermined format using the viewer program; and

faxing the predetermined format using the viewer program.

22. The method of claim 18, wherein the viewer program is an executable program.

23. A computer readable medium having stored therein instructions for causing a central processing unit to execute the method of claim 18.

24. A digital signature method, comprising:

converting, on a first computer system, digital data representative of a document into a predetermined format;

digitally signing the predetermined format to provide a digital signature;

transmitting the digital signature, the predetermined format, and a file including one or more parameters from the first computer system to a second computer system;

decrypting and verifying the digital signature on the second computer system;

using the one or more parameters of the file, downloading a viewer module from a third computer system to the second computer system, said one or more parameters being used to identify the viewer module on said third computer system; and

viewing the predetermined format using the viewer module to provide the representation of the document.